

STATE OF DELAWARE



DEPARTMENT OF TRANSPORTATION

Invitation to Bid

for

CONTRACT **DOT1003-PED SIGNAL DIS**

PEDESTRIAN SIGNAL DISPLAY AND PEDESTRIAN PUSH BUTTONS

STATEWIDE

NOTE: THE COMBINATION 100% PAYMENT/PERFORMANCE BOND IS WAIVED FOR THIS CONTRACT, IN LIEU OF A 10% BID BOND ONLY.

Completion Date Three (3) Calendar Years

29 Del.C. §6923 and
SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION
DELAWARE DEPARTMENT OF TRANSPORTATION
AUGUST 2001

Bids will be received in the Bidder's Room (B1.11.01), Transportation Administration Center, 800 Bay Road, Dover, Delaware until 2:00 P.M. local time March 1, 2011

**PEDESTRIAN SIGNAL DISPLAY AND PEDESTRIAN PUSH BUTTONS
STATEWIDE**

LOCATION

STATEWIDE

DESCRIPTION

This contract provides for the preparation and delivery of PEDESTRIAN SIGNAL DISPLAY AND PEDESTRIAN PUSH BUTTONS to the Division of Maintenance and Operations, at the following location, the Sign Shop, 56 Sign Shop Road, Dover, DE 19903 as designated in the proposal and as ordered by the Director of Highway Operations or his authorized representative.

COMPLETION DATE

All work on this contract must be complete within Three (3) Calendar Years.

PROSPECTIVE BIDDERS NOTE:

1. No retainage will be withheld on this contract.
2. The Department has adopted an External Complaint Procedure. The procedure can be viewed on our website at; <http://www.deldot.gov/information/business/>, or you may request a copy by calling (302) 760-2555.

**STATE OF DELAWARE
CONSTRUCTION ITEMS UNITS OF MEASURE**

English Code	English Description	Multiply By	Metric Code	Metric Description	Suggested CEC Metric Code
ACRE	Acre	0.4047	ha	Hectare	HECTARE
BAG	Bag	N/A	Bag	Bag	BAG
C.F.	Cubic Foot	0.02832	m ³	Cubic Meter	M3
C.Y.	Cubic Yard	0.7646	m ³	Cubic Meter	M3
EA-DY	Each Day	N/A	EA-DY	Each Day	EA-DY
EA-MO	Each Month	N/A	EA-MO	Each Month	EA-MO
EA/NT	Each Night	N/A	EA-NT	Each Night	EA/NT
EACH	Each	N/A	EA	Each	EACH
GAL	Gallon	3.785	L	Liter	L
HOURL	Hour	N/A	h	Hour	HOURL
INCH	Inch	25.4	mm	Millimeter	MM
L.F.	Linear Foot	0.3048	m	Linear Meter	L.M.
L.S.	Lump Sum	N/A	L.S.	Lump Sum	L.S.
LA-MI	Lane Mile	1.609	LA-km	Lane-Kilometer	LA-KM
LB	Pound	0.4536	kg	Kilogram	KG
MFBM	Thousand Feet of Board Measure	2.3597	m ³	Cubic Meter	M3
MGAL	Thousand Gallons	3.785	kL	Kiloliter	KL
MILE	Mile	1.609	km	Kilometer	KM
S.F.	Square Foot	0.0929	m ²	Square Meter	M2
S.Y.	Square Yard	0.8361	m ²	Square Meter	M2
SY-IN	Square Yard-Inch	0.8495	m ² -25 mm	Square Meter-25 Millimeter	M2-25 MM
TON	Ton	.9072	t	Metric Ton (1000kg)	TON
N.A.*	Kip	4.448	kN	Kilonewton	N.A.*
N.A.*	Thousand Pounds per Square Inch	6.895	MPa	Megapascal	N.A.*

*Not used for units of measurement for payment.

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GENERAL NOTICES

SPECIFICATIONS:

The specifications entitled "Delaware Standard Specifications, for Road and Bridge Construction, August, 2001", hereinafter referred to as the Standard Specifications, Supplemental Specifications, the Special Provisions, notes on the Plans, this Bid Proposal, and any addenda thereto shall govern the work to be performed under this contract.

CLARIFICATIONS:

Under any Section or Item included in the Contract, the Contractor shall be aware that when requirements, responsibilities, and furnishing of materials are outlined in the details and notes on the Plans and in the paragraphs preceding the "Basis of Payment" paragraph in the Standard Specifications or Special Provisions, no interpretation shall be made that such stipulations are excluded because reiteration is not made in the "Basis of Payment" paragraph.

ATTESTING TO NON-COLLUSION:

The Department requires as a condition precedent to acceptance of bids a sworn statement executed by, or on behalf of, the person, firm, association, or corporation to whom such contract is to be awarded, certifying that such person, firm, association, or corporation has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with such contract. The form for this sworn statement is included in the proposal and must be properly executed in order to have the bid considered.

TAX CLEARANCE:

As payments to each vendor or contractor aggregate \$2,000, the Division of Accounting will report such vendor or contractor to the Division of Revenue, who will then check the vendor or contractor's compliance with tax requirements and take such further action as may be necessary to insure compliance.

LICENSE:

A person desiring to engage in business in this State as a contractor shall obtain a license upon making application to the Division of Revenue. Proof of said license compliance to be made prior to, or in conjunction with, the execution of a contract to which he has been named.

BID/PAYMENT/PERFORMANCE BOND GUARANTEE:

For this contract, the following special guaranty provisions apply:

1. Bidders for this contract must submit with their bid a Bid Bond, in an amount totalling ten percent (10%) of the total bid price, in the form of a certified check, cashier's check, treasurer's check, or other negotiable or transferrable instrument satisfactory to the Department, evidencing an unconditional debt to the Department.
2. The requirement for a payment/performance bond is waived.
3. If the bid is unsuccessful or withdrawn before the bid opening, the bond instrument will be construed as a bid bond and returned in compliance with Sections 102.10 and 103.04 of the Standard Specifications, as applicable.
4. Sections 103.06 and 103.07 of the Standard Specifications apply to bids under this contract.

BUY AMERICA:

References:

23 USC 313

ISTEA Section 1041(a) and 1048(a)

23 CFR 635.410

Applicability:

Applicable to all materials used in Federal-aid projects

Guidance:

This contract requires the use of domestic steel and iron in products produced for Federally funded projects. All foreign steel and iron materials and products are covered by Buy America regardless of the percentage they comprise in a manufactured product or the form they may take. The regulations allow bidders and the contracting agency some latitude through minimum use, waivers, and alternate bids.

All manufacturing processes must take place domestically. Manufacturing begins with the initial melting and mixing, and continues through the coating stage. Any process which modifies the chemical content, the physical size or shape, or the final finish is considered a manufacturing process. These processes include rolling, extruding, machining, bending, grinding, drilling and coating. "Coating" includes epoxy coating, galvanizing, painting, or any other coating that protects or enhances the value of the material.

Buy America does not apply to raw materials (iron ore and alloys), scrap, pig iron or processed, pelletized, and reduced iron ore.

If domestically produced steel billets or iron ingots are shipped overseas for any manufacturing process, and then returned to the U.S., the resulting product does not conform with the Buy America requirements.

The manufacturing process for a steel/iron product is considered complete when the product is ready for use as an item (e.g., fencing, posts, girders, pipe, manhole cover, etc.) or could be incorporated as a component of a more complex product through a further manufacturing process (e.g., the case for a traffic signal head). The final assembly process does not need to be accomplished domestically so long as the steel/iron component is only installed and no manufacturing process is performed on the steel/iron component.

For the Buy America requirements to apply, the steel or iron product must be permanently incorporated into the project. Buy America does not apply to temporary steel items, e.g., temporary sheet piling, temporary bridges, steel scaffolding and falsework, etc.

Buy America provisions apply to all steel and iron materials that is to be permanently incorporated in a Federal-aid project, even if an item is rendered as a "donated material" in accordance with 23 U.S.C. 323 - Donations and Credits.

For additional information, refer to the following website:

<http://www.fhwa.dot.gov/programadmin/contracts/core02.cfm#s2B01>

Refer to section B. Other Contract Provisions.

NOTICE TO ALL PERSONNEL ENGAGED ON FEDERAL-AID HIGHWAY PROJECTS

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined not more than \$10,000 or imprisoned not more than 5 years or both."

XI. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

1. Instructions for Certification - Primary Covered Transactions:

(Applicable to all Federal-aid contracts - 49 CFR 29)

a. By signing and submitting this proposal, the prospective primary participant is providing the certification set out below.

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective primary participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the department or agency determined to enter into this transaction. If it is later determined that the prospective primary participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause of default.

d. The prospective primary participant shall provide immediate written notice to the department or agency to whom this proposal is submitted if any time the prospective primary participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "lower tier covered transaction," "participant," "person," "primary covered transaction," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of rules implementing Executive Order 12549. You may contact the department or agency to which this proposal is submitted for assistance in obtaining a copy of those regulations.

f. The prospective primary participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from

participation in this covered transaction, unless authorized by the department or agency entering into this transaction.

g. The prospective primary participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," provided by the department or agency entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the nonprocurement portion of the "Lists of Parties Excluded From Federal Procurement or Nonprocurement Programs" (Nonprocurement List) which is compiled by the General Services Administration.

i. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph f of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

* * * * *

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Primary Covered Transactions

1. The prospective primary participant certifies to the best of its knowledge and belief, that it and its principals:

a. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;

b. Have not within a 3-year period preceding this proposal been convicted of or had a civil judgement rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

c. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph 1b of this certification; and

d. Have not within a 3-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

2. Where the prospective primary participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

* * * * *

2. Instructions for Certification - Lower Tier Covered Transactions:

(Applicable to all subcontracts, purchase orders and other lower tier transactions of \$25,000 or more - 49 CFR 29)

a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "primary covered transaction," "participant," "person," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of rules implementing Executive Order 12549. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations.

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the Nonprocurement List.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

* * * * *

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Covered Transactions:

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

* * * * *

XII. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

(Applicable to all Federal-aid construction contracts and to all related subcontracts which exceed \$100,000 - 49 CFR 20)

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

3. The prospective participant also agrees by submitting his or her bid or proposal that he or she shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such recipients shall certify and disclose accordingly.

SUPPLEMENTAL SPECIFICATIONS TO THE AUGUST 2001 STANDARD SPECIFICATIONS

**EFFECTIVE AS OF THE ADVERTISEMENT
DATE OF THIS PROPOSAL
AND INCLUDED BY REFERENCE**

**The Supplemental Specifications can be viewed and printed from
the Department's Website.**

To access the Website;

- in your internet browser, enter; <http://www.deldot.gov>
- on the left side of the page under 'INFORMATION', Click; 'Publications'
- scroll down under 'MANUALS' and Click; "Standard Specifications 2001"

The full Website Link is;

http://www.deldot.gov/information/pubs_forms/manuals/standard_specifications/index.shtml

Printed copies of the Supplemental Specifications are available upon request. A printed copy of the above referenced Supplemental Specifications will be included in the final contract documents upon award.

The Contractor shall make himself aware of these revisions and corrections (Supplemental Specifications), and apply them to the applicable item(s) of this contract.

SPECIAL PROVISIONS

**DELAWARE DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION SOLUTIONS
TRAFFIC SECTION**

**PEDESTRIAN SIGNAL DISPLAYS AND PEDESTRIAN PUSH BUTTONS
CONTRACT NO. DOT1003-PED_SIGNAL_DIS**

GENERAL:

This contract provides for the preparation and delivery of pedestrian signal displays, pedestrian signal display mounting assemblies and pedestrian push button assemblies to the Division of Transportation Solutions, Traffic Section as designated in the proposal and as ordered by the Chief Engineer or designee.

In all questions relating to this contract, the decision(s) of the Chief Engineer, Department of Transportation, shall be final.

SUBMISSION OF PROPOSALS:

This contract will be bid in its entirety as an Itemized Lump Sum Contract.

Bidders must submit proposals only upon forms provided by the Department. Proposals otherwise submitted will be rejected. Proposals, including all required documentation, must be submitted in a separate envelope and the envelope clearly marked "Proposal for Division of Transportation Solutions Contract Number DOT1003-PED_SIGNAL_DIS".

FOR BID CONSIDERATIONS:

The bidder must furnish, with his proposal, the manufacturer's latest dated printed brochure(s) which shall contain complete specifications to enable the Department to compare and determine if the article(s) offered complies with the intent of the specifications and will be satisfactory for the purpose.

EXEMPT FROM TAXES:

Articles covered by the proposal are exempt from all Federal and State taxes, if any are applicable, and such taxes shall not be included in the prices quoted. Necessary or applicable tax exemption forms shall accompany each invoice.

LENGTH OF CONTRACT:

The period of this contract is from the date of "Notice to Proceed" for three (3) calendar years with the option to extend the contract for two (2) additional one-year periods. Both parties in writing must approve any one-year extensions at least 90 days prior to expiration of the existing contract, or any extension thereof.

PRICES QUOTED:

The prices quoted shall be those for which the article(s) will be furnished free-on-board (F.O.B.) at designated points of delivery and shall include all charges that may be imposed under this contract. No qualifying letter or statements in the proposal or separate discounts will be considered in determining the low bid.

QUANTITIES:

The quantities shown are for comparison of bids only. The Department may increase or decrease any quantity or quantities without penalty or change in the bid price.

BASIS OF AWARD:

This contract will be awarded to the lowest qualified bidder on the basis set forth by these provision and specifications; said specifications are attached to, and are part of this contract.

SUBLETTING OR ASSIGNMENT OF CONTRACT:

The contractor shall give his personal attention to the faithful execution of the work, shall keep the same under his personal control and shall not assign by power of attorney or otherwise sublet the work or any part thereof and shall not either legally or equitably assign any of the monies payable under this agreement or his claim thereto unless by and with the previous written consent of the Chief Engineer of Transportation Solutions.

RIGHT TO TERMINATE THE CONTRACT:

The Department reserves the right to terminate the contract for failure to meet the provisions of the contract.

Failure to meet a delivery deadline shall result in a review for termination. If termination occurs because of failure of the contractor to satisfactorily complete a delivery, the Department may require removal of all equipment not accepted.

DOCUMENTS:

All documents, plans, specifications, or the like required to be submitted for review, approval, or information after the bids are opened shall be submitted to the Chief Traffic Engineer, Department of Transportation, 169 Brick Store Landing Road, Smyrna, DE 19977.

DELIVERY:

All items shall be ordered by purchase order. Each purchase order shall be promptly acknowledged in writing stating the estimated date of delivery. Delivery must be made within fifty (50) calendar days after receipt of a purchase order to the location noted on the purchase order.

Traffic Signal Construction Section
56 Sign Shop Road
Dover, DE 19903

Notification must be given at least three (3) days prior to delivery to the above address. If this notification is not given, any and all expenses incurred because of any unloading delay shall be the responsibility of the contractor.

EXTENSION OF DELIVERY TIME:

The Department will only consider an extension of the delivery time specified under the terms of this contract in cases where labor strikes shall prevent the required fulfillment of the contract. Evidence of such delays must be submitted for consideration. Knowledge of existing or pending strikes will be taken into consideration in awarding the contract.

INSPECTION AND ACCEPTANCE TESTING:

Upon delivery, the article(s) will be inspected by an authorized representative of the Division of Transportation Solutions, and if found damaged from any cause, including but not limited to transportation, or manufacturing or material defects, or if it fails in any way to meet these specifications, it shall be rejected. Rejected material shall be replaced by the contractor within the delivery time limit specified at no cost to the Department.

The Department will require independent, off-site testing of a random sampling of the supplied signal displays to ensure compliance with these specifications. The contractor shall bear all expenses associated for the testing. In the event that one or more of the tested signal displays are found to not meet these specifications, the entire order of signal displays shall be returned to the contractor and replaced within the delivery time limit specified at no cost to the Department.

LIQUIDATED DAMAGES:

A sum of Fifty Dollars (\$50.00) per day will be deducted by the Department from monies due the contractor, not as a penalty, but as Liquidated Damages for each ordered article not delivered within fifty (50) calendar days from the date of receipt of the purchase order.

BASIS OF PAYMENT:

The article(s) required in this contract will be paid for at the unit price bid, upon presentation of triplicate billing certified by an authorized representative of the contractor subject to the Department's approval and acceptance of the delivered article(s).

No payment will be made for any unordered article(s) or any expected profit(s), and/or for any other reason or purpose under any circumstance including but not limited to termination of this contract.

WARRANTY:

The contractor shall extend any policy guarantee usually offered to purchasers on article(s) and/or service(s) against defective material and workmanship. The contractor shall replace free of charge any part or component that fails in any manner by reason of defective material, design, or workmanship within a period of five (5) years from the date of payment for the article(s).

MANUALS:

A complete set of documentation shall be supplied. It shall include parts lists, operation details, maintenance schedules, and other information needed to install and operate the article(s).

DESIGN STANDARDS:

All materials and workmanship shall conform to the standards of the American Society for Testing Materials (ASTM), latest edition, and the standards of the American National Standards Institute (ANSI) latest edition.

All electrical equipment shall conform to the standards of the National Electrical Manufacturer's Association (NEMA), the Underwriters Laboratories, Inc. (UL), Institute of Electrical and Electronic Engineers, Inc. (IEEE), and the Electronic Industries Association (EIA), wherever applicable (latest edition).

The LED module shall conform to the Institute of Transportation Engineers (ITE). Pedestrian Traffic Control Signal Indicators: Light Emitting Diode (LED) Signal Modules, Draft Version of 2009.

Size, Design, and Illumination of Pedestrian Signal Display Indications shall conform to the Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD), latest edition and the Standard Highway Signs and Markings, latest edition.

For those items not specifically defined herein, good practice as shown in previous articles supplied by the contractor, and/or as used by the industry in general, shall apply.

A representative of the Department will be available to discuss good practice and "state of the art". The bidder is notified that neither claims for additional costs nor extensions of delivery times will be honored on the basis of good practice and/or "state of the art" problems. The bidder is required to know his field.

The bidder must show by field review, if necessary, and by the various documents that are required as part of the bid that the materials proposed will perform as required.

PRODUCTS BY NAME, APPROVED EQUAL:

Specifications of a **PRODUCT BY NAME** is intended to be descriptive of quality, workmanship, finish, function, and approximate characteristics desired and are not necessarily intended to be restrictive. Approved equals are always considered.

For each product specified by name, the bidder may present a substitute product(s) for review. Upon review, the Department will determine if it is an **APPROVED EQUAL**.

A substitute product is an **APPROVED EQUAL** of the product named when, in the opinion of the Department; it is equal or superior in quality, workmanship, finish, characteristics, and function to that specified herein.

SPECIFICATIONS

PURPOSE:

The establishment of specifications for the preparation and delivery of pedestrian signal displays, pedestrian signal display mounting assemblies, and pedestrian push button assemblies for replacement and new installations.

All specifications must be met even if a particular location may not require all of the specified elements.

GENERAL:

The Pedestrian Signal Displays supplied under this contract shall be pre-assembled and shall include a Light Emitting Diode (LED) module and signal display housing. Pedestrian Signal Displays shall not require further assembly by DelDOT. LED Modules shall be supplied under this contract as a component of the Pedestrian Signal Display and as a separate item.

Pre-assembled Pedestrian Signal Displays supplied under this contract shall be one of two types:

1. Pedestrian Signal Display with Side-by-Side “Hand/Person” LED module
2. Pedestrian Signal Display with Countdown LED module

Pedestrian Signal Display Mounting Assemblies supplied under this contract shall be one of four types:

1. Pole-Mount Left-Hand Clam Shell Assembly
2. Pole-Mount Right-Hand Clam Shell Assembly
3. Post Top-Mount One-Way Assembly
4. Post Top-Mount Two-Way Assembly

Pedestrian Push Button Assemblies supplied under this contract shall be utilized in conjunction with Pedestrian Signal Displays. Pedestrian push button assemblies supplied under this contract shall not be audibly locatable.

The Pedestrian Push Buttons supplied under this contract shall be one of two types:

1. Pedestrian Push Button Assembly
2. LED Pedestrian Push Button Assembly

The following are the detail specifications for pedestrian signal displays, pedestrian signal display mounting assemblies and pedestrian push button assemblies.

PEDESTRIAN SIGNAL DISPLAY WITH SIDE-BY-SIDE “HAND/PERSON” LED MODULE
PEDESTRIAN SIGNAL DISPLAY WITH COUNTDOWN LED MODULE

Each pedestrian signal display shall be a one-section display. It shall include the LED module and the signal display housing.

LED Module:

Each module shall consist of a fully encapsulated assembly that utilizes LEDs as the light source and a message lens. The individual LED shall be wired such that a failure of one or more LEDs will result in the loss of light from that LED only and the loss of not more than one (1) percent of the module light output. The LEDs shall be the ultra bright type rated for 100,000 hours of continuous operation.

Configuration

Messages shall be displayed in the Portland Orange “Upraised Hand” (“Hand”), the White “Walking Person” (“Person”), and the Portland Orange “Numeric Countdown” (“Countdown”) icons illuminated by multiple configuration LEDs.

The “Hand” and the “Person” icons shall be each a minimum of 11” (279 mm) in height and 7” (178 mm) in width. The “Countdown” icon shall consist of two 7-segment digits forming the time display. The height of the “Countdown” icon digits shall be 9” (229 mm) and the overall width of the digit display (both digits side-by-side) shall be 7” (178 mm). Each individual 7-segment digit shall be 3.25” (83 mm) wide, with 0.5” (13 mm) of space between the two digits.

The “Hand” and the “Person” icons shall be included on all modules. If the “Countdown” icon is used in conjunction with the “Hand” and the “Person” icons, the “Hand” and the “Person” icons shall be overlaid upon each other and located to the left of the “Countdown” icon. If the “Countdown” icon is not used, the “Hand” and the “Person” icons shall be arranged side-by-side with the “Hand” icon to the left of the “Person” icon.

Electrical Requirements

Power consumption shall not exceed 15 watts for the “Hand” icon, 10 watts for the “Person” icon, and 10 watts for the “Countdown” icon at a temperature of 77° F (25° C). Individual LED driving current shall be less than 10 milliamps for each icon at a temperature of 77° F (25° C).

The module shall operate from a 60 hertz \pm 3 hertz AC line over a voltage ranging from 80 volts to 135 volts. Nominal operating voltage shall be 120 \pm 3 volts. Fluctuations in line voltage within the range of 80 volts to 135 volts shall not affect luminous intensity by more than \pm 10 percent. When input voltage is less than 35 volts the module shall turn off automatically. Each icon of the module shall reach 90 percent of their full illumination (turn-on) within 75 milliseconds of the application of the nominal operating voltage. The module shall not be illuminated (turn-off) after 75 milliseconds of the removal of the nominal operating voltage. The module shall include voltage surge protection to withstand high-repetition noise transients and low-repetition high-energy transients as stated in Section 2.1.8 of NEMA Standard TS-2, latest edition.

At a temperature of 77° F (25° C), the power factor (PF) shall be greater than 0.9, and the total harmonic distortion (THD) shall be less than 20 percent.

Electromagnetic Interference (EMI) shall meet Class A emission limits referred to in Federal Communications Commission (FCC) Title 47, Subpart B, Section 15 regulation.

Photometric Requirements

The minimum luminous intensity for a minimum period of 60 months shall be 409 footlamberts (1400 cd/m²) for the “Hand” icon, 642 footlamberts (2200 cd/m²) for the “Person” icon, and 409 footlamberts (1400 cd/m²) for the “Countdown” icon.

The uniformity of the “Hand”, “Person”, and “Countdown” luminance shall meet a ratio of not more than one (1) to five (5) between the minimum and maximum luminance values, as measured in 1/2” (12 mm) diameter spots.

The chromaticity coordinates of the module shall meet the requirements shown in the following table:

<u>Icon</u>	<u>Color</u>	<u>Color Regions (based on 1931 CIE Chromaticity Diagram)</u>
“Hand”	Portland Orange	y: less than 0.39; greater than 0.331; greater than 0.990-x
“Person”	White	x: greater than 0.28; less than 0.400 y: greater than 0.0983 + 0.7917*x; less than 0.0483 + 0.7917*x
“Countdown”	Portland Orange	y: less than 0.39; greater than 0.331; greater than 0.990-x

Flashing Requirements

The light source of a flashing “Hand” signal indication shall be capable of flashing continuously at a rate of not less than 50 or more than 60 times per minute. The displayed period of each flash shall be a minimum of 1/2 and a maximum of 2/3 of the total flash cycle.

Environmental Requirements

The module shall be protected against dust and moisture intrusion per the requirements of MIL-STD-810F Procedure I, Rain and Blowing Rain. The module shall have an Ingress Protection (IP) rating of at least 54.

The module shall meet all specifications in the operating temperature range of -40° F (-40° C) to +165° F (+74° C).

Message Lens

The message lens shall be made of plastic and have a smooth outer surface. The lens shall be ultraviolet-stabilized and shall be capable of withstanding ultraviolet (direct sunlight) exposure for a minimum of 60 months. The inside of the message lens shall be painted in black in all areas except where the desired icons are formed to form a contrasting background when viewed from the outside.

Installation Requirements

A module shall be capable of replacing the existing optical components or signal module in a signal housing, or shall provide a complete replacement of the signal head. Installation of a module into existing housing shall not require the use of special tools. The module shall connect directly to existing electrical wiring system.

Signal Display Housing:

Each pedestrian signal display housing shall consist of case housing, complete with housing door, field terminal assembly and visor. The maximum overall dimensions of the housing shall not exceed 18.5” wide x 18.7” high x 9.1” deep (470 mm wide x 475 mm high x 231 mm deep) including visor.

Housing

The housing shall be a one-piece corrosion resistant aluminum alloy die-casting free of defects such as cracks and burrs. The housing shall have top and bottom openings to accommodate standard 1-1/2" (38 mm) pipe brackets. The opening shall have a Shurlock boss integrally cast into the housing. The radial angular grooves of the Shurlock boss, when used with Shurlock fittings, shall provide positive five (5) degree increment positioning of the entire signal display to eliminate rotation or misalignment of the signal display.

Two (2) integrally cast hinge lugs and screw slots shall be on each side of the housing. The housing shall be capable of providing a swing down housing door.

Housing Door

The housing door shall be a one-piece corrosion resistant aluminum alloy die-casting. Two (2) hinge lugs shall be cast on top of the door, and two (2) latch points shall be cast on the bottom. The door shall be attached to the housing by two (2) hinge pins. Two (2) eye bolts and wing nuts shall be provided for opening and closing the door without the use of special tools.

A gasket groove on the inside of the door shall accommodate a weatherproof and mildew proof resilient gasket which, when the door is closed, will seal against a raised bead of the housing, making a positive seal.

Field Terminal Assembly

The field terminal assembly shall include a three (3)-terminal pair (6 screw) type terminal block for termination of the three (3) field wires for AC (+) for the "Hand" and "Person" or "Countdown" icon, and AC (-). Connected to the opposite side of these terminals shall be a pigtail lead. The free end of each lead shall be terminated with an insulated female quick disconnect socket that mates with the male lug supplied on the LED Module. The field terminal assembly shall include an aluminum base plate that shall be bolted to the signal display housing.

Visor

The visor shall be designed to eliminate sun phantom and minimize damage to the LED Module. The visor shall be installed parallel to the face of the signal display. The visor shall be held in place by stainless steel screws. The visor assembly shall consist of a minimum of 20 straight horizontal louvers and 21 zigzag pattern horizontal louvers.

Material Treatment

Prior to assembling, all aluminum elements shall be thoroughly cleaned and a chromate conversion coating shall be applied inside and out as per Military Specification MIL-DTL-5541F. Synthetic enamel conforming to Military Specification TT-E-529 shall be electro-statically applied. The finish shall be oven cured for at least 20 minutes at a temperature of 350° F (177° C).

The signal display housing shall be supplied in two standard colors: yellow (Federal Standard 595B-13538) and black.

When an installation is completed, the signal display shall be dustproof, weatherproof, and corrosion resistant.

POLE-MOUNT LEFT-HAND CLAM SHELL ASSEMBLY
POLE-MOUNT RIGHT-HAND CLAM SHELL ASSEMBLY

Clam shell assemblies are acceptable as are stand-off brackets using 1-1/2" (38 mm) iron pipe complete with suitable lock nuts and waterproofing washers.

The clam shell assembly shall consist of two cast aluminum alloy pieces: a pole half and a signal display half. The two separate castings shall be joined in the final assembly by the use of stainless steel spring pins. The spring pins shall be factory installed into the hinge ears which shall be integrally cast into the pole half of the assembly. Final mating of the two halves shall be accomplished by inserting the spring pins into the drilled hinge ears of the signal display half of the assembly (loose fit).

The pole half of the assembly shall be designed to adapt to a wide range of pole configurations, including a 4" (102 mm) minimum diameter. The pole mating surface shall be configured much like terminal compartments used for conventional bracket mounting.

Mounting

Unit construction shall allow for through-bolt, bolt-to-tapped pole, lag screw, and band-it type mounting.

Through-bolt mounting shall accept two (2) 1/2" (13 mm) diameter hex head bolts located on 9" (229 mm) centers. A channel with a recessed shoulder shall be included to retain the bolt head (or nut) and thus prevent rotation. Clearance shall be provided on the mating half of the assembly such that the bolt can extend through the nut when it is desired to bury the nut and bolt end inside rather than bury the bolt head inside.

The clam shell assembly shall include an option for bolting directly to a tapped pole or lag screwing directly to a wood pole. Steel spacers with a 9/16" (14 mm) hole to slip over the shank and under the head of the mounting bolt or the lag screw shall be purchased separately.

Band-it type mounting shall be provided by integrally casting two (2) recessed slots near the top and bottom of the pole half of the assembly. The corners of these slots shall be relieved to prevent damage to the band-it strapping material. Approximate dimensions of each slot shall be 7/8" (22 mm) wide and 1/8" (3 mm) deep thus adequately retaining 3/4" (19 mm) strapping material.

The bolt hole shall be elongated from side to side, and the recessed shoulder shall be curved to allow rotation of the installed assembly 15 degrees in either direction from center for a total of 30 degrees, when installed on a 4" (102 mm) pole.

The mounting assemblies shall allow a pole-to-signal display clearance of approximately 2" (51 mm).

Vandal Proof Installation

The signal display half of the clam shell assembly shall be secured to the pedestrian signal display housing with four (4) 5/16" (8 mm) bolts. The pedestrian signal display (with the signal display half of the clam shell assembly) shall be mounted on the pole by lining up the mounting pins of the pole half with the mounting ears of the signal display half and lowering to the permanent position. The pedestrian signal display (with the signal display half of the clam shell assembly) shall then be rotated until the clam shell is closed. Securing is accomplished by inserting the flathead socket bolt and tightening with a 3/16" (5 mm) allen wrench.

Terminal Block and Wiring

Three (3) sets of screw terminal pairs shall be located on a terminal block in the upper third of the signal display half of the clam shell assembly. A corresponding rainshield shall be provided in the upper third of the pole half to prevent water entrenchment onto the terminal block. A closed cell neoprene sponge

gasket shall be provided on the mating surfaces of the two halves of the clam shell assembly to complete the raintight construction.

Provisions shall be provided to allow wiring to the field wires by conventional screw type terminals or by quick disconnects. Field wires shall be No. 14 AWG.

When pedestrian signal displays and clam shell assemblies are ordered concurrently, the clam shell assembly shall be mechanically assembled to and wired to the pedestrian signal display on the side specified. Top and bottom holes of the pedestrian signal display housing shall be plugged as part of the clam shell assembly installation procedure.

POST TOP-MOUNT ONE-WAY ASSEMBLY
POST TOP-MOUNT TWO-WAY ASSEMBLY

Each Post Top-Mount One-Way Assembly shall include a slipfitter, a serrated lockring, a neoprene gasket and a cast nipple.

Post Top-Mount Two-Way Assemblies shall be necessary in instances where two (2) pedestrian signal displays are to be mounted on the same post top. Each Post Top-Mount Two-Way Assembly shall include a slipfitter, a serrated lockring, four (4) neoprene gaskets, five (5) cast nipples, two (2) lower arm nipples, an upper arm nipple, four (4) ells, and a closure cap.

Slipfitter:

The slipfitter shall be cast from aluminum alloy 319 or equivalent. The material shall possess a minimum yield strength of 18 KSI and a minimum tensile strength of 27 KSI. The material shall possess a minimum Brinell hardness of 70 and a maximum elongation of two (2) percent in 2" (51 mm).

The slipfitter shall be free of voids, pits, dents, molding sand and excessive foundry grinding marks. All design radii shall be smooth and intact. Exterior and interior surface finish shall be smooth and cosmetically acceptable, free of molding fins, cracks and other exterior blemishes.

The slipfitter shall have an alodine conversion coating to provide a proper base for paint adhesion. All hardware shall be plated zinc with yellow dichromate or stainless steel.

Slipfitters for both one-way and two-way assemblies shall have openings on the top surface. In addition to the top opening, slipfitters for two-way assemblies shall have two (2) openings on the horizontal plane 180 degrees apart and 90 degrees from the top opening. Each opening shall have a 1-1/2" (38 mm) – 11-1/2 NPS threaded boss extending 1/2" (13 mm) beyond the surface of the opening. The threaded boss at the top opening shall be drilled, tapped, and provided with a 1/4" (7 mm) – 20 x 3/8" (10 mm) socket head setscrew and shall have a 3/16" (5 mm) x 1/4" (6 mm) notch for a serrated lockring. The threaded bosses at the side openings shall be drilled, tapped and provided with a 1/4" (7 mm) – 20 x 1/2" (13 mm) socket head setscrew.

Slipfitters for one-way assemblies shall have a total height of 4-3/4" (121 mm). Slipfitters for two-way assemblies shall have a total height of 6-3/4" (171 mm).

At its bottom, the slipfitter shall have a 4-3/4" (121 mm) inside diameter (I.D.) and a 5-1/2" (140 mm) outside diameter (O.D.). Slipfitters for one-way assemblies shall have a minimum depth of 3-3/4" (95 mm) to allow for a slip fit onto an aluminum or galvanized steel pole. Slipfitters for two-way assemblies shall have a minimum depth of 3-1/2" (89 mm), but shall not obstruct side openings. The pole shall be prohibited from extending into the threaded bosses by four (4) cast tabs or stops. A minimum of 2-1/2" (64 mm) shall remain above the tabs to provide ease of wiring.

The slipfitter shall fit onto the pole by means of six (6) 3/8" (10 mm) - 16 x 3/4" (19 mm) square head setscrews. The setscrews shall be located in two horizontal reinforcing rings and installed on 120 degree centers.

Serrated Lockring:

The serrated lockring shall have a 1-15/16" (49 mm) I.D. and a 2-1/2" (64 mm) O.D. The lockring shall be serrated on one side and shall have two (2) locking tabs, 3/16" (5 mm) wide by 1/4" (6 mm) long. Round locking tabs shall not be acceptable. The lockring shall be die cast from aluminum alloy 380. The serrated side of the lockring shall consist of 72 serrations which will allow for the pedestrian signal display to be adjusted in five degree increments.

Neoprene Gasket:

The gasket shall be made from 60-70 durometer neoprene, and shall be 1/16" (1.6 mm) thick. The gasket shall have a 1-7/8" (+1/16", -0") (48 mm [+1.6 mm, -0 mm]) I.D. and a 2-11/16" (±1/16") (68 mm [±1.6 mm]) O.D.

Cast Nipple:

The cast nipple shall be made from ductile iron alloy ASTM A-536 (Grade 65-45-12). The nipple shall have a thread length of 1-1/2" (38 mm) and shall be machined 1-1/2" (38 mm) – 11-1/2 NPS. The head of the nipple shall be hexagonal shape with spanner wrench indents on each corner and shall have a 2-7/16" (62 mm) O.D. The nipple shall be plated per ASTM B-633 electro-deposited zinc coating Class SC3, severe duty.

Lower Arm Nipple:

The lower arm nipple shall be iron. Each arm nipple shall be 10" (254 mm) long and have a 1-1/2" (38 mm) O.D. Each lower arm nipple shall connect to a lower arm ell.

Upper Arm Nipple:

The upper arm nipple shall be iron. Both ends of the upper arm nipple shall connect to an upper arm ell. The upper arm nipple shall have a 1-1/2" (38 mm) O.D. The upper arm nipple shall be long enough to for both ends to connect to an ell connected to the top of a pedestrian signal display connected to the lower arm assembly.

Ell:

Each ell shall be iron. Each ell shall have a 1-1/2" (38 mm) O.D. Each ell shall have two (2) openings. Each opening shall have a serrated circumference. One opening shall connect to either the lower arm or upper arm nipple. The other opening shall connect to the cast nipple that shall connect to the pedestrian signal display.

Closure Cap:

The closure cap shall plug the hole on the top of the slipfitter. The closure cap shall be injection molded from ABS plastic. The plastic shall be loaded with UV stabilizers. All hardware necessary to secure the closure cap to the top hole of the slipfitter shall be included.

PEDESTRIAN PUSH BUTTON ASSEMBLY
LED PEDESTRIAN PUSH BUTTON ASSEMBLY

The pedestrian push button assembly shall conform to all minimum size requirements set forth by the Americans with Disabilities Act (ADA). The push button assembly shall be designed to prevent electrical shock under any weather conditions and shall have provisions for grounding in accordance with the National Electrical Code (NEC).

Each pedestrian push button assembly shall include the push button housing complete with front cover and a push button switch. The LED push button assemblies shall also include LED/audible indicator. Any control equipment necessary for the push button assemblies to operate as specified herein shall be supplied as necessary at no additional charge. Cost for such control equipment shall be incorporated into the push button assembly unit price. The bidder shall assume an average of six (6) push buttons assemblies per intersection for the purposes of distributing control equipment costs. Any control equipment shall fit into a standard traffic signal control cabinet.

Push Button Housing:

The push button housing shall be cast aluminum. The rear of the housing shall be curved and designed to accommodate pole diameters from 3" (76 mm) to 14" (356 mm). There shall be a 1/2" (12 mm) diameter access hole for wiring at the rear of the housing. The access hole shall be capped with a plastic plug. The housing shall be tapped at the front to allow for mounting of the front cover.

Front Cover:

The front cover shall be cast aluminum. A neoprene gasket shall provide a weather-tight seal between the housing and the cover. The cover shall be secured with stainless steel, vandal-resistant screws. The screws shall also secure the push button switch to the housing.

Push Button Switch:

The push button switch shall be actuated by a 2" (51 mm) diameter mushroom plunger. A spring installed between the plunger and the switch shall not provide an operating force of more than 5 pounds (22.2 newtons). There shall be a moisture barrier between the plunger and the switch. The push button switch shall be capable of operating in a temperature range of -30° F (-34° C) to +165° F (+74° C) and shall be rated for up to 10,000,000 actuations. The push button switch shall be electrically rated to carry 25 amps at 125 volts AC, 250 volts maximum. When an installation is completed, the pedestrian push button shall be weatherproof and tamperproof.

LED/Audible Indicator:

When the pushbutton is activated, an internal LED shall illuminate only during non-walk phases and remain lit until the beginning of "Walk" phase. The LED/audible indicator shall remain dark/silent until the pushbutton is activated. The LED shall be "ultra-bright red" that provides a minimum of 1000 mcd diffused through a 160 degree viewing angle lens. An audible "beep" shall also be activated in conjunction with the lighting of the LED.

BID PROPOSAL FORMS

CONTRACT DOT1003-PED SIGNAL DIS

ITEM NO.	APPROX. QUANTITY	ITEMS & UNIT PRICES IN WORDS	UNIT PRICES IN DOLLARS & CENTS	AMOUNT IN DOLLARS & CENTS
1	240	Each Pedestrian Signal Display with Side-by-Side "Hand/Person" LED Module @ <div> <div></div> <div>Dollars &</div> <div></div> <div>Cents</div> </div> per each		
2	360	Each Pedestrian Signal Display with Countdown LED Module @ <div> <div></div> <div>Dollars &</div> <div></div> <div>Cents</div> </div> per each		
3	240	Each Side-by-Side "Hand/Person" LED Module @ <div> <div></div> <div>Dollars &</div> <div></div> <div>Cents</div> </div> per each		
4	360	Each Countdown LED Module @ <div> <div></div> <div>Dollars &</div> <div></div> <div>Cents</div> </div> per each		
5	180	Each Pedestrian Signal Display with Side-by-Side "Hand/Person" LED Module and Pole-Mount Left-Hand Clam Shell Assembly @ <div> <div></div> <div>Dollars &</div> <div></div> <div>Cents</div> </div> per each		
6	270	Each Pedestrian Signal Display with Countdown LED Module and Pole-Mount Left-Hand Clam Shell Assembly @ <div> <div></div> <div>Dollars &</div> <div></div> <div>Cents</div> </div> per each		

ITEM NO.	APPROX. QUANTITY	ITEMS & UNIT PRICES IN WORDS	UNIT PRICES IN DOLLARS & CENTS	AMOUNT IN DOLLARS & CENTS
7	180	Each Pedestrian Signal Display with Side-by-Side "Hand/Person" LED Module and Pole-Mount Right-Hand Clam Shell Assembly @ _____ _____		
8	270	Each Pedestrian Signal Display with Countdown LED Module and Pole-Mount Right-Hand Clam Shell Assembly @ _____ Dollars & _____ Cents per each		
9	300	Each Post Top-Mount One-Way Assembly @ _____ Dollars & _____ Cents per each		
10	300	Each Post Top-Mount Two-Way Assembly @ _____ Dollars & _____ Cents per each		
11	750	Each Pedestrian Push Button Assembly @ _____ Dollars & _____ Cents per each		
12	750	Each LED Pedestrian Push Button Assembly @ _____ Dollars & _____ Cents per each		

TOTAL BID AMOUNT \$ _____

CERTIFICATION

Contract No. DOT1003-PED SIGNAL DIS

The undersigned bidder, _____ whose address is _____
_____ and telephone number is _____
_____ hereby certifies the following:

I/We have carefully examined the location of the proposed work, the proposed plans and specifications, and will be bound, upon award of this contract by the Department of Transportation, to execute in accordance with such award, a contract with necessary surety bond, of which contract this proposal and said plans and specifications shall be a part, to provide all necessary machinery, tools, labor and other means of construction, and to do all the work and to furnish all the materials necessary to perform and complete the said contract within the time and as required in accordance with the requirements of the Department of Transportation, and at the unit prices for the various items as listed on the preceding pages.

The foregoing quantities are considered to be approximate only and are given as the basis for comparison of bids. The Department of Transportation may increase or decrease the amount of any item or portion of the work as may be deemed necessary or expedient. Any such increase or decrease in the quantity for any item will not be regarded as a sufficient ground for an increase or decrease in the unit prices, nor in the time allowed for the completion of the work, except as provided in the contract.

Accompanying this proposal is a surety bond or a security of the bidder assigned to the Department of Transportation, for at least ten (10) percentum of total amount of the proposal, which deposit is to be forfeited as liquidated damages in case this proposal is accepted, and the undersigned shall fail to execute a contract with necessary bond, when required, for the performance of said contract with the Department of Transportation, under the conditions of this proposal, within twenty (20) days after date of official notice of the award of the contract as provided in the requirement and specifications hereto attached; otherwise said deposit is to be returned to the undersigned.

I/We are licensed, or have initiated the license application as required by Section 2502, Chapter 25, Title 30, of the Delaware Code.

By submission of this proposal, each bidder and each person signing on behalf of any bidder, certifies as to its own organization, under penalty of perjury, that to the best of each signer's knowledge and belief:

1. The prices in this proposal have been arrived at independently without collusion, consultation, communication, or Agreement with any other bidder or with any competitor for the purpose of restricting competition.
2. Unless required by law, the prices which have been quoted in this proposal have not been knowingly disclosed and will not knowingly be disclosed by the bidder, directly or indirectly, to any other bidder or competitor prior to the opening of proposals.
3. No attempt has been made or will be made by the bidder to induce any other person, partnership, or corporation to submit or not to submit a proposal for the purpose of restricting competition.

I/We acknowledge receipt and incorporation of addenda to this proposal as follows:

No.	Date	No.	Date	No.	Date	No.	Date	No.	Date
-----	------	-----	------	-----	------	-----	------	-----	------

(FAILURE TO ACKNOWLEDGE RECEIPT OF ALL ADDENDA WILL RESULT IN THE BID BEING DECLARED NON-RESPONSIVE.)

Sealed and dated this _____ day of _____ in the year of our Lord two thousand and _____
_____ (20__).

Name of Bidder (Organization)

Corporate
Seal

By:

Authorized Signature

Attest _____

Title

SWORN TO AND SUBSCRIBED BEFORE ME this ____ day of _____, 20__.

Notary
Seal

Notary

BID BOND

TO ACCOMPANY AND FOR CONTRACT NO. DOT1003-PED SIGNAL DIS
(in the Amount of 10% of the Total Contract)

KNOW ALL MEN BY THESE PRESENTS That: _____ of _____
_____ in the County of _____ and the State of _____ as **Principal**
and _____ of _____ in the County of _____
_____ and State of _____ as **Surety**, legally authorized to do business in the State of
Delaware ("**State**"), are held firmly bound unto the **State** in the sum of _____
_____ Dollars (\$ _____), or _____ percent not to exceed _____
_____ Dollars (\$ _____), to be paid to the **State**
for the use and benefit of **DOT**, as well as for the use and benefit of the Division of Revenue in the case
of claims under this bond for any and all taxes due the **State** relating to this contract, for which payment
well and truly to be made, we do bind ourselves, our and each and every of our heirs, executors,
administrators, successors, and assigns, jointly and severally for and in the whole firmly by these
presents.

NOW THE CONDITION OF THIS OBLIGATION IS SUCH That if the said above bounden
Principal who has submitted to the **DOT** of the **State**, a certain proposal to enter into a certain contract
designated by the parties as Contract No. DOT1003-PED SIGNAL DIS, for the furnishing of certain
materiel and/or services within the said **State**, shall well and truly provide and furnish all the materials,
appliances and tools and perform all the work and labor required under and pursuant to the terms and
conditions of said Contract, and of the proposal and specifications contained therein, and shall also
indemnify and keep harmless the said **State** and the **DOT**, from all costs, damages, and expenses growing
out of or by reason of the work and under said Contract above mentioned, including, but not limited to,
the Contractor indemnifying and keeping harmless the said **State** and the **DOT** from all costs, damages,
settlements, expenses and attorneys' fees relating to any allegations of patent infringement or unlawful use
of a patented article growing out of, or by reason of, this Contract, including Contractor providing at
Contractor's expense to said **State** or the **DOT** legal counsel of said **State** or **DOT's** own choosing, and
shall well and truly pay all and every person furnishing material or performing labor, all and every sum or
sums of money due him, them or any of them, for all such labor and materials for which the **Principal** is
liable; then this obligation shall be void or else to be and remain in full force and virtue; and every person
furnishing materials or performing labor or services for the **Principal** under the said Contract may
maintain an action on this bond for his/her own use in the name of the **State** in any court of competent
jurisdiction for recovery of such sum or sums of money as may be due such person from the **Principal**.

Sealed with _____ seal and dated this _____ day of _____ in the year of our Lord two thousand and _____ (20__).

SEALED, AND DELIVERED IN THE
presence of

Corporate Seal

Name of Contractor

Attest _____

By:

Authorized Signature

Title

Corporate Seal

NAIC# (**REQUIRED**)

Name of **Surety**

ADDRESS OF SURETY

TELEPHONE NUMBER OF SURETY

Witness: _____

By:

Signature

Title

Social Security Number

ADDRESS

TELEPHONE NUMBER OF SIGNER

NOTE: (1) All surety insurers must be licensed and authorized to transact business in the State of Delaware in accordance with Delaware Code, Title 18, Insurance Code.

(2) Pursuant to the licensing requirements of Delaware Code, Title 30, Section 2101, bidder is required under this contract to attach a copy of his trade and/or business license obtained from the State of Delaware, Department of Finance.

